

CLAIMS

1. A printhead for an ink jet printer, the printhead comprising
at least one printhead chip, said at least one printhead chip comprising
5 a substrate; and
a plurality of nozzle arrangements positioned on the substrate, each nozzle
arrangement comprising
nozzle chamber walls and a roof wall that define a nozzle chamber,
the roof wall defining at least one ink ejection port; and
10 an ink ejection mechanism that is operatively positioned with respect
to the nozzle chamber to eject ink from the at least one ink ejection port on displacement of
the ink ejection mechanism; and
a nozzle guard that is positioned on the, or each respective, printhead chip, the
nozzle guard comprising
15 a body member that is spaced from and spans the printhead chip, the body
member defining a plurality of passages that extend through the body member, the body
member being positioned so that each passage is aligned with one of the ink ejection ports,
a thickness of the body member and a cross sectional area of each passage being such that
ink ejected from the ink ejection ports can pass through the passages; and
20 a support structure that is interposed between the body member and the
printhead chip, the support structure being configured to permit the flow of air into a space
defined between the body member and the printhead chip and through each passage to keep
the passages clear of particles.
- 25 2. A printhead as claimed in claim 1, in which the substrate is in the form of a silicon
wafer substrate.
3. A printhead as claimed in claim 2, in which each nozzle arrangement is the product
of an integrated circuit fabrication process carried out on the silicon wafer substrate so that
30 the nozzle arrangement defines a micro-electromechanical system.

4. A printhead as claimed in claim 1, in which the support structure is defined by a plurality of struts that are interposed between the body member and the printhead chip.